

Attorney Docket No. 70904-56737

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT: A. Takahashi et al.

EXAMINER: A. Cao

SERIAL NO.: 10/004,564

GROUP: 2652

FILED: December 5, 2001

FOR: DISC CARTRIDGE AND DISC DRIVE

**CERTIFICATE OF FACSIMILE TRANSMISSION**

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted by facsimile to Group 2600 of the U.S. Patent & Trademark Office by facsimile number 703-872-9314 on October 27, 2003.

By: 

Steven M. Jensen

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RESPONSE TO OFFICE ACTION**

Sir:

The following is in response to the Office Action mailed June 27, 2003, in the above referenced application. A request for a one-month extension of time is submitted herewith.

Applicants' claimed invention is directed to a disc cartridge (independent claim 1) and a disc drive for using the disc cartridge (independent claims 21 and 24). As recited in claims 1, 21, and 24, the disc cartridge is so arranged that a disc cover covers at least a recording/reproducing surface of the disc, and an opposite side of the disc is externally exposed. A head for recording/reproducing information on the disc accesses the recording/reproducing surface.

This arrangement prevents the recording/reproducing surface of the disc from being damaged, and protects the recording/reproducing surface from dust and/or dirt.

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The Applicants' claimed invention provides a highly reliable disc cartridge with a reduced thickness, as compared to the prior art (see specification at page 5, line 24 to page 6, line 5; see also page 22, second full paragraph).

Moreover, the disc drive of the Applicants' invention is so arranged that recording/reproducing is performed by separating the disc 1 and the disc cover 2 so as to allow a head 11 to be inserted between the disc 1 and the disc cover 2 (claim 21; see FIGS. 4(a) to 4(d)), or by opening a shutter 30 provided on the disc cover 2 so as to expose the disc 1 and move a head 35 close to the exposed disc for the recording/reproducing operation (claim 24; see FIG. 14).

Claims 1, 3, 4, 9, and 16-20 were rejected under 35 USC 103(a) as being unpatentable over U.S. Patent 5,548,571 to Mistretta in view of U.S. Patent 6,339,583 to Watanabe et al. (hereinafter "Watanabe"). Claims 2 and 10-15 were rejected under 35 USC 103(a) as being unpatentable over Mistretta and Watanabe, and further in view of U.S. Patent 5,202,880 to Lec et al. Claims 5 and 6 were rejected under 35 USC 103(a) as being unpatentable over Mistretta and Watanabe, and further in view of U.S. Patent 4,677,516 to Iizuka et al. Claims 21, 22, 24, and 26 were rejected under 35 USC 103(a) as being unpatentable over Mistretta in view of U.S. Patent 5,537,281 to Ma et al. These rejections are respectfully traversed, and for convenience are addressed together.

Mistretta fails to teach or suggest a disc cartridge (claim 1) or a disc drive for using a disc cartridge (claims 21 and 24) in which a disc cover covers at least the recording/reproducing surface, which is accessed by the head for recording/reproducing information on the disc.

In the Office Action, the Examiner stated that the Watanabe reference teaches: "a disk cartridge having a disk cover covered at least a surface for recording/reproducing, which is accessed by a head for recording/reproducing information with respect to the disk" (Office Action, page 3).

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Watanabe relates to a structure of a cartridge for containing an information-recording medium having a substrate made of resin or plastic. The cartridge structure of Watanabe seeks to avoid deformation during storage of the information-recording medium (see column 1, lines 9-16).

Plastic substrates, which are effective for mass production, are known to suffer from deformation such as warping or flexure, as compared to substrates made of aluminum or glass (see column 1, lines 29-32). An object of Watanabe is "to provide a novel cartridge for accommodating an information-recording medium based on the use of a plastic substrate," that is, a cartridge which makes it possible to avoid deformation (warping and flexure) of the recording medium when the cartridge is stored in any posture (column 2, lines 60-65). Specifically, Watanabe addresses the problem of storing the cartridge when the recording medium is accommodated obliquely (see column 2, line 66 to column 3, line 4).

Watanabe discloses a cartridge 100 having a cartridge case 3 on which a window is formed for accessing the information-recording medium (i.e., disk 1) in the cartridge; a shutter 6 for opening and closing the window; and a deformable elastic member/plate spring 30 provided on an inner surface of the shutter for making contact with the disk 1 in the cartridge case 3, thereby fixing the disk 1 when the shutter 6 is closed, where an arm section 31 and pressing section 33 of the plate spring 30 are retracted into a space between the inner surface of the shutter and a surface of the cartridge case 3 when the shutter 6 is open (see column 11, lines 20-23; FIGS. 1A to 1C).

In Watanabe, when the shutter 6 is closed, the plate spring 30 is applied on the inner surface of the shutter 6 and presses the disk 1 inside the cartridge case 3. This prevents the disk 1 from moving in the cartridge even if the cartridge is arranged perpendicularly, or when the cartridge is left to lean against a wall, and thus keeps the disk 1 pressed against the inner surface of the cartridge to prevent deformation.

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The disk cartridge 100 of Watanabe can protect the disk 1 from dust, dirt, and the like. However, the disk cartridge 100 covers the entire surface of the disk 1, i.e., both sides of the disk 1, similar to a conventional disc cartridge (see, e.g., FIGS. 1-6 and 8-10 of Watanabe).

Therefore, the disk cartridge in Watanabe is substantially different in structure than the disc cartridge and disc drive recited in claims 1, 21, and 24. According to the Applicants' claimed invention, the disc cover covers at least a recording/reproducing surface of the disc, where an opposite surface of the disc is externally exposed. In Watanabe, both sides of the disk are covered by the cartridge case 3. Moreover, Watanabe does not teach or suggest a cartridge that prevents damage to the recording/reproducing surface and repels dust and dirt for use in a disc drive of reduced thickness.

Even if Watanabe were somehow combined with Mistretta, it would not be possible to produce the Applicants' claimed invention, for at least the reasons discussed above. Therefore, the claims should now be in condition for immediate allowance. However, if there are any outstanding issues, the Examiner is urged to call the undersigned at the phone number listed below.

Respectfully submitted,  
EDWARDS & ANGELL, LLP  
Dike Bronstein Roberts & Cushman  
Intellectual Property Group

Date: October 27, 2003

By: 

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FAX (617) 439-4170**FACSIMILE TRANSMITTAL****DATE:** October 27, 2003**TO:** U.S. Patent & Trademark Office  
Examining Group 2600**FAX NO.:** 1-703-872-9314**FROM:** Steven M. Jensen**FAX NO.:** 617-439-4170**Our Docket No.:** 70904-56737**No. of Pages (incl. cover):** 9**Re:** U.S. Serial Number 10/004,564**MESSAGE:****RECEIVED  
CENTRAL FAX CENTER****OCT 27 2003**Please enter the attached Response to Office Action and transmittal. **OFFICIAL****NOTICE**

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*If a timely response has been filed after a Final Office Action, an extension of time is required to permit filing and/or entry of a Notice of Appeal or filing and/or entry of an additional amendment after expiration of the shortened statutory period unless the timely-filed response placed the application in condition for allowance. Of course, if a Notice of Appeal has been filed within the shortened statutory period, the period has ceased to run." Notice of December 10, 1985 (1061 O.G. 34-35).*

**NOTE:** See 37 C.F.R. Section 1.645 for extensions of time in interference proceedings, and 37 C.F.R. Section 1.550(c) for extensions of time in reexamination proceedings.

3. The proceedings herein are for a patent application and the provisions of 37 C.F.R. Section 1.136 apply.

*(complete (a) or (b), as applicable)*

- (a) ☒ Applicant petitions for an extension of time under 37 C.F.R. Section 1.136 (fees: 37 C.F.R. Section 1.17(a)(1)-(4)) for the total number of months checked below:

	Extension (months)	Fec for other than <u>small entity</u>	Fec for <u>small entity</u>
<input checked="" type="checkbox"/>	one month	\$ 110.00	\$ 55.00
<input type="checkbox"/>	two months	\$ 420.00	\$ 210.00
<input type="checkbox"/>	three months	\$ 950.00	\$ 475.00
<input type="checkbox"/>	four months	\$ 1,480.00	\$ 740.00

Fee: \$ 110.00

If an additional extension of time is required, please consider this a petition therefor.

*(check and complete the next item, if applicable)*

- ☐ An extension for \_\_\_\_\_ months has already been secured. The fee paid therefor of \$ \_\_\_\_\_ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request \$ \_\_\_\_\_

**OR**

- (b) ☐ Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition for extension of time.

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**FEE FOR CLAIMS**

4. The fee for claims (37 C.F.R. Section 1.16(b)-(d)) has been calculated as shown below:

							OTHER THAN A SMALL ENTITY							
(Col. 1)			(Col. 2)		(Col. 3) SMALL ENTITY									
Claims Remaining After Amendment			Highest No. Previously Paid For		Present Extra		Addit. Fee		OR		Rate		Addit. Fee	
Total	**	Minus	**	=	x \$9 =	\$					x \$18 =	\$		
Indep.	**	Minus	**	=	x \$42 =	\$					x \$84 =	\$		
[ ] First Presentation of Multiple Dependent Claim					+ \$140 =		\$				+ \$280 =		\$	
						Total Addit. Fee		\$	OR		Total Addit. Fee		\$	

\* If the entry in Col. 1 is less than the entry in Col. 2, write "0" in Col. 3,

\*\* If the "Highest No. Previously Paid For" IN THIS SPACE is less than 20, enter "20".

\*\*\* If the "Highest No. Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest No. Previously Paid For" (Total or Indep.) is the highest number found in the appropriate box in Col. 1 of a prior amendment or the number of claims originally filed.

**WARNING:** "After final rejection or action (Section 1.113) amendments may be made canceling claims or complying with any requirement of form which has been made." 37 C.F.R. Section 1.116(a) (emphasis added).

(complete (c) or (d), as applicable)

(c) [X] No additional fee for claims is required.

OR

(d) [ ] Total additional fee for claims required \$

**FEE PAYMENT**

5. [ ] Attached is a check in the sum of \$\_\_\_\_.  
 [X] Charge Account No. 04-1105 the sum of \$110.00.

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**FEE DEFICIENCY**

**NOTE:** *If there is a fee deficiency and there is no authorization to charge an account, additional fees are necessary to cover the additional time consumed in making up the original deficiency. If the maximum, six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in returning the papers to the PTO Finance Branch in order to apply these charges prior to action on the cases. Authorization to charge the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986, (1065 O.G. 31-33).*

6. ☒ If any additional extension and/or fee is required, charge Account No. 04-1105.

**AND/OR**

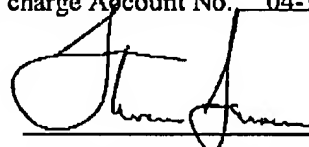
- ☒ If any additional fee for claims is required, charge Account No. 04-1105.

Date: October 27, 2003

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SIGNATURE OF PRACTITIONER

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